

## **A Theoretical & Conceptual Examination of Low-Income, First-Generation College Students and Service-Learning**

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### **Abstract**

This scholarly paper utilizes a Deweyian theory of learning layered with Astin's conceptual I-E-O model to examine how students' background characteristics affect their experience with participation in service-learning courses and the resulting outcomes. The model is applied to the experiences of low-income, first-generation students for implications and significance.

### **Keywords**

*Higher Education, Service-Learning, Low-Income, First-Generation,*

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### Abstract

This scholarly paper utilizes a Deweyian theory of learning layered with Astin's conceptual I-E-O model to examine how students' background characteristics affect their experience with participation in service-learning courses and the resulting outcomes. The model is applied to the experiences of low-income, first-generation students for implications and significance.

### Introduction

Despite a proposal in 2011 by President Obama to increase the budget for the Corporation for National and Community Service, the past two years have seen repeated severe cuts to the budget of this national agency which includes programs like Learn and Serve America<sup>1</sup>, AmeriCorps, and several other service agencies. What does the governmental funding of CNCS have to do with research on service-learning? Research on service, and specifically service-learning, is imperative to inform the incredibly difficult decisions that our country's leaders must make about resources allocation. In other words, without research on the outcomes and experiences of multiple groups of people that participate in service-learning decisions that cut funding supporting service and service-learning are likely to continue prompted by misinformation about the efficacy of such initiatives. This argument also applies to state legislators and educational leaders. From an educational perspective, this requires more and better research on the ways in which we develop an educated, productive, citizenry. More specifically, more research is needed about the pedagogies and practices that support students

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<sup>1</sup> Learn and Serve America is a program of the Corporation for National and Community Service that directly and indirectly serve K-Higher Ed institutions through grants, training, and research to facilitate service-learning projects.

from backgrounds that may limit their academic success. In particular, greater attention is needed to inform policies and practices that seek to engage low-income, first-generation students in service-learning courses as a method of increasing their academic success.

Connecting the need for service-learning research to current economic realities is not meant to be a feeble attempt to exaggerate the importance of this topic. The fiscal reality of decreased public funding to many institutions has resulted in many institutional cutbacks. Historically, such economic realities have disproportionately negatively effected the already disenfranchised. In 2006 the Educational Trust released a report, *Promise abandoned: How policy choices and institutional practices restrict college opportunities*, that sharply criticizes governmental and institutional practices and policies that serve to actually limit access of low-income, first-generation students from entering into higher education (Haycock). Utilizing several datasets from NCES, the report concludes that institutional practices and policies have a not only limited the access of low-income, first-generation students but that institutional indifference has also lead to disproportionately lower levels of persistence. This paper seeks to explore a Deweyian theoretical framework of service-learning layered with Astin's (1991) Input-Environment-Outcomes Model for the expressed purpose of better understanding the learning experiences of low-income, first-generation students within service-learning courses. This layering of theoretical and conceptual frameworks serves as the foundation to argue that differences in students' background characteristics have an effect upon the experiences of low-income, first-generation students with service-learning and thereby the related outcomes for this population. Greater understanding of the learning experience for low-income, first-generation students will provide increased understanding of the practices and

policies that may lead to increased academic success for this student population and better application of this viable and effective pedagogy.

### **Literature Review**

Research has shown that low-income, first-generation college students experience a variety of complex barriers to success that range from academic preparation to cultural capital (Choy & Berker, 2003; Horn, 1997; Forsyth, & Furlong, 2003; Pascarella & Terenzini, 2005; Perna, 2002; Wapole, 2003). The following review of literature explores several of empiric works that help contextualize common characteristics of low-income, first-generation students and help enumerate the challenges that make academic success difficult for these students. According to a 2008 report released by the Pell Institute, *Moving Beyond Access: College Success For Low- Income, First-Generation Students*<sup>2</sup>, about 24% (4.5 million) of the undergraduate college population in America are low-income, first-generation students (Engle & Tinto). However, for many of these students their chances of persistence to degree are extremely low. According to NCES's Beginning Postsecondary Study: 1996-2001 (2002), low-income, first-generation college students are nearly four times more likely to exit college in their first year than their peers with neither of these characteristics. Moreover, within six years a mere 11% of low-income, first-generation students had earned a bachelor's degree or higher, compared to average student population's persistence rate of 55%.

What are the characteristics of low-income, first-generation population that may help explain this average persistence rate? Analysis conducted by Engle & Tinto (2008) reveals that low-income, first generation college students disproportionately come from racial and ethnic

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<sup>2</sup> Low-income status is operationalized in this report as having a family income below \$25,000 and first-generation status includes students whose parents do not have bachelor's degrees.

minority backgrounds with lower levels of academic preparation, they also tend to be older, are less likely to receive financial support from parents, and more likely to have multiple outside of college obligations. Despite these “high-risk” characteristics Engle & Tinto conclude that even after taking low-income, first-generation student’s background characteristics, enrollment patterns, and academic preparation into account, this population is still at a disproportional risk of academic failure which they conclude “suggests that the lower performance and persistence rates of low-income, first-generation students are as likely the result of the experiences they have *during* college as it is attributable to the experiences they have *before* they enroll [sic]” (p. 20).

In an article discussing the outcomes and experiences of low-income college students, Walpole (2003) argues that students from varying levels of cultural capital have differing *habiti*, defined as a student’s goals for and perceptions of opportunity. In her longitudinal study of over 12,000 respondents from more than 200 four-year institutions Walpole found that compared to their high socioeconomic peers, low socioeconomic status students spend less time in academic capital building activities (e.g., studying), have lower GPA’s and spend more time working—most likely out of necessity—and subsequently have lower levels of income and lower levels of educational attainment. Walpole’s findings about low-income students are mirrored by several studies that consistently indicated that first-generation students are similarly less likely to participate in academically purposeful activities that have been related to increased academic success (Astin, A.W., 1997; Caberera, A., Nora, A., & Castaneda, M., 1992; Lohfink, M.M. & Paulsen, M.B., 2005; Pascarella, E.T., Peirson, C.T., Wolniak, G.C., & Terenzini, P.T., 2003). While it is certain that the samples of these studies overlap to an extent the similarity in

findings only supports the conjecture that students within the intersection of low-income and first-generation are more likely to struggle with academic and social integration.

In an examination of the factors that significantly contribute to high GPA attainment, Nettles, Thoeny, & Gosman (1986) found that the most important contributing factor to high GPA's was low feelings of racial discrimination; having high high-school GPA's and high SAT scores were the third and fourth most important factors. High-school GPA and SAT scores illustrate the impact pre-college preparation can have upon student success. A multitude of studies have shown that low-income, first-generation students are less prepared than their peers when entering college and that this lack of preparation constitutes a barrier to academic achievement (Forsyth & Furlong, 2003; Horn, 1997; Perna, 2002).

Similar to her findings about students' lack of investment in academic capital, Wapole's (2003) study also found that students of lower cultural and socioeconomic capital spend less time investing in social capital (involvement in clubs and groups) than their peers. Wapole argues that these findings are cause for concern since other researchers (Carter, 1999; Pascarella & Terenzini, 2005; Tinto, 1993) have found such involvement is positively correlated with student persistence. For low-income, first-generation students, experiences that allow students to engage with varying perspectives is not only a valuable skill for critical thinking, Wapole's (2003) findings suggest these experiences are important to allow students to learn a new habitus that includes aspirations of college success. Yet still, despite the fact that 63% of low-income, first-generation students intent to graduate with at least a bachelor's degree a mere 5% achieve this goal within six years (Engle & Tinto, 2008).

As the literature indicates, these barriers inhibit the learning and development of both academic and affective outcomes. Institutions seeking to educate and develop students in and beyond college from diverse backgrounds utilize many pedagogies and practices; including service-learning. This is no surprise considering the bulk of the literature on service-learning indicates that participation in courses that utilize this pedagogy are related to increases in a variety of these academic and affective outcomes. Institutional attention towards issues of academic success for “at-risk” students has resulted in several well-intended but often ineffective programs and curricula, including various levels of institutionalized service-learning. Despite critiques that question the positioning of service-learning as an educational panacea (Butin, 2006), research shows the bulk of students who participate in courses utilizing a service-learning courses have statistically significant gains in cognitive and affective outcomes (Astin & Sax, 1998; Astin, Vogelgesang, Ikeda, & Yee, 2000; Campus Compact, 2010 & 2011; Eyler & Giles, 1999; Vogelgeslang & Astin, 2000). While this research has been invaluable to the exploration of student learning and its associated gains for development, the vast amount of this research has continued to focus on white, students (and in particular female) from middle- and upper-class backgrounds. Despite limited research on low-income, first-generation students’ participation in service-learning, many institutions have placed expectations upon service-learning courses to produce the similar outcomes for these students as past research has indicated for the general student population.

As the demographics in higher education become more diverse, the research about the usefulness of service-learning must encompass a similarly diverse population. Low-income, first-generation students are of particular interest because of the possible impact that service-learning may have in mitigating common barriers they may face; however, blind application of

any pedagogy is never advised. Instead theory and research is needed to appropriately apply this pedagogy in ways that are likely to accomplish intended learning goals. Research in service-learning has mirrored that of the wider field by “not serving the needs of those who have traditionally been excluded from positions of power” (Mertens, 2007, p. 212). Broadening the scope of service-learning research is also in line with the axiology of service-learning as a transformative pedagogy.

### **Philosophic & Theoretical Argument<sup>3</sup>**

As research on the outcomes of service-learning has increased over the past two decades efforts to institutionalized service-learning have increased across the higher education landscape. A survey of the annual Campus Compact reports over the past decade illustrate increased full and part-time personnel and offices or centers with specific responsibilities for service-learning and community service initiatives. There is a serious assumption that often undergirds these efforts in relation to objectives of utilizing this pedagogy with underrepresented student populations: the assumption that participation in service-learning will yield similar experiences and/or outcomes as for all student groups as has been demonstrated with a largely mainstream population (Butin, 2006). Theoretically, this assumption is first called into question by Dewey’s theory of learning.

#### **Dewey’s Philosophy of Education**

Dewey’s (1938) book, *Experience and Education*, asserts that understanding the nature of human experience is prerequisite to understanding education. Dewey describes a theory of learning that results from the interplay between two principles: interaction and continuity.

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<sup>3</sup> Relevant literature is woven throughout this proposal and especially within the theoretical argument. As such it is not given a separate section.



Dewey's principle of interaction forms a longitudinal dimension where each experience a person has is seen as a transaction between the individual and the environment that will influence the future in some way. Dewey's philosophy of learning is rooted in this transaction between individual and environment. Dewey says this "situation"—the context in which an experience can occur—is where knowledge can be acquired and applied. Dewey argues that the principle of interaction is most readily evaluated by assessing if the experience has carried some sort of educational value and thus asserts that every experience will be either educative or "miseducative". Dewey provides the example of a matchmaker for this principle. A matchmaker would seek to provide a potential pairing with the best first interaction possible knowing that if the each individual, whether they continue to date or not, will be more inclined to participate in finding a match and—having learned in the experience—more equipped to date in the future. In contrast a poor interaction, or miseducative experience, is likely to lead to disengagement in the matching process. The principle of interaction positions educators as matchmakers between a student and material where the learning experiences—if educative—will propel the student to more learning experiences and create thirst for such experience and, quite literally, a love of learning.

Related but different, Dewey's principle of continuity forms a lateral continuum where present experiences are affected by past experiences and will by extension effect future experiences. Essentially, the principle of continuity asserts that a person's present experience is a constitution of the interaction of the present situation with the habits of emotional response, perception, appreciation, sensitivity, and attitudes that have developed from past experiences (Carver & Enfield, 2006). As Dewey puts it, "every experience both takes up something from those which have gone before and modifies in some way the quality of those which come after"

(p. 35). This principle therefore allows for the shaping of current experiences to be educative through accounting for the past experiences and even planning for future interactions. In both principles learning is inextricably linked to a person's background as it forms the "longitudinal and lateral aspects of experience" (Dewey, 1938, p. 44). Dewey's principles of interaction and continuity highlight the role students' backgrounds have in learning and the potential for service-learning to create educative experiences. Several scholars position Dewey's principles of continuity and interaction as the theoretical foundations of service-learning and attribute its success to providing "situations" for learning that draw upon students' personal backgrounds (Eyler & Giles, 1999; Giles & Eyler, 1994; Jacoby & Associates, 1996).

### **Astin's Conceptual Framework**

Astin's (1991) conceptual framework of student outcomes also provides theoretical evidence to suggest that students' backgrounds would produce varying outcomes. In Astin's own words, "The I-E-O model is very simple, yet it provides a powerful framework for the design of assessment activities and for dealing with even the most complex and sophisticated issues in assessment and evaluation" (p. 16). The origins of the model come from Astin's examination of graduate program's ability to produce PhD's (an outcome). Astin questioned if program outputs were merely a condition of the quality of inputs. For example would programs that recruited high quality students produce more PhD's regardless of the quality of their programs or vice versa? These early explorations convinced Astin that accurate assessment required taking into account student inputs, student outcomes, and the educational environment the students experienced. Pascarella & Terenzini (2005) further clarify Astin's framework saying:

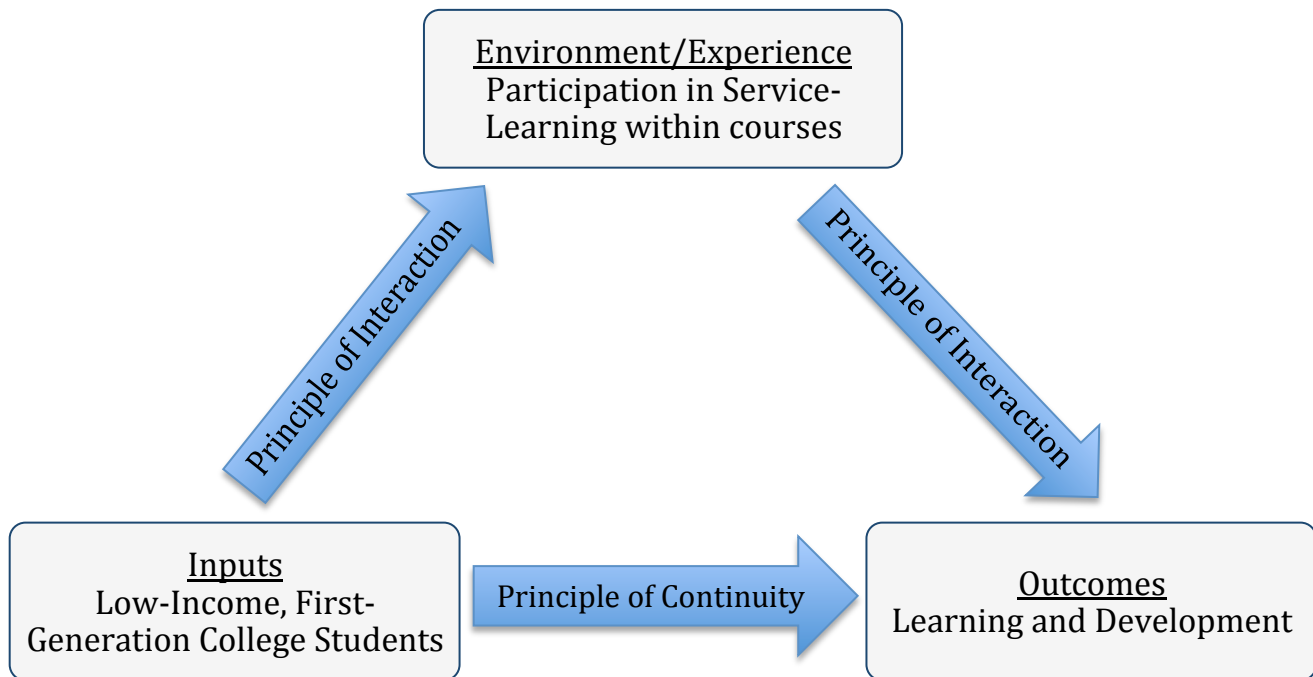
According to this model, college outcomes are viewed as functions of three sets of elements: *inputs*, the demographic characteristics, family backgrounds and academic and social experiences that students bring to college; *environment*, the full range of people, programs, policies, cultures, and experiences that students encounter in college, whether on or off campus; and *outcomes*, students' characteristics, knowledge, skills, attitudes, values, beliefs, and behaviors as they exist after college. (p. 53)

The I-E-O model allows the researcher(s) to account for the effect of students' background characteristics (inputs), the experience of participating in service-learning courses while in higher education (environment), and to measure the resulting impact that experience may have upon the students' development of academic skills, diversity skills, and civic engagement (outcomes).

### **A Layered Model Approach**

The I-E-O model is essential for capturing two things: First, it illustrates Dewey's principle of interaction at work in the influence of inputs upon environment; second, it illustrates Dewey's principle of continuity in the influence of inputs upon outcomes. Figure 1 is a visual representation of the layering of Dewey's principles and Astin's model.

Fig. 1. Theoretical &amp; Conceptual Model of Service-Learning



As Figure 1 illustrates, Dewey's principle of interaction is positioned within the arrows connecting inputs to environment/experiences, and from environment/experiences to outcomes. This placement captures the transaction that occurs in an experience leading to an educative or miseducative situation. The transaction between student and experience is intimately connected to who they are as a person—their inputs—and their goals. A connection to the material or experience engages the student and can produce desired learning outcomes. Concordantly, a lack of connection leads to disengagement and little chance of accomplishment of the desired learning outcomes. I place the Dewey's principle of continuity in the arrow connecting inputs and outcomes in an effort to capture the idea that all past experiences—and the subsequent attitudes and habits of the heart and mind resulting from those experiences—takes from those that have gone before and therefore have a measure of independent effect upon the outcomes of the current experience. In this way, the principle of continuity introduces as temporal aspect to

Astin's I-E-O model. This temporal element provides a more realistic application of the I-E-O model to environments and experiences allowing the model to capture the effect of the past upon present and present upon future.

In relation to service-learning, this model provides a clear theoretical argument for the impact that students' backgrounds play in the learning experience. Service-learning courses that target low-income, first-generation students will need to pay special attention to the ways in which those common background characteristics inform the service-learning experience and subsequent outcomes. This model provides a theoretical explanation for Engle & Tinto's (2008) sobering conclusion that there is something about the actual college experience of low-income, first-generation students that increases their risk of academic failure. This model points to the fact that the current educational experiences of low-income, first-generation students are deeply shaped by their distinct background characteristics. As a result, future research is desperately needed to help understand how these experiences maybe utilized for increased academic success.

### **Implications & Significance**

The theoretical and conceptual model of service-learning purposed above illustrates the process by which student background characteristics effect the experience of service-learning and its outcomes. This model is consistent with the Eyler & Giles (1999) premise that the primary learning component of service-learning for mainstream students occurs from an experience with the "other"; a concept only possible in juxtaposition to one's self-image and therefore deeply tied to background. This layered model has two important implications. First, this model extends theoretical understanding of how students' backgrounds affect the experience and outcomes of service learning. This implication is significant for the practice of

service-learning pedagogy and shaping educative experiences by understanding how various students' backgrounds will impact their experience.

Second, this model indicates that various student background characteristics will likely result in variation in outcomes related to their participation in service-learning. This implication is significant for the future research and appropriate validation of service-learning as an effective pedagogy. To measure the effectiveness of service-learning courses for low-income, first-generation students, research should be conducted to explore what outcomes are related to this participation for this particular population. For instance, this model would suggest that low-income, first-generation students may not experience the same experience with the "other" if they were tutoring low-income elementary children resulting in a growth of pluralistic orientation; however, the experience of mentoring children from similar backgrounds as themselves may produce an experience that results in growth in community engagement.

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